

SM3H 7.1 The Law of Sines (key-odds)

1. $\gamma = 44^\circ$, $b = 14.4$, $c = 10.5$

3. $\beta = 26^\circ$, $a = 14.6$, $b = 35.8$

5. no triangle possible

7. $\gamma = 15.6^\circ$, $\alpha = 26.3^\circ$, $a = 10.3$

9. $\alpha_1 = 45.1^\circ$, $\gamma_1 = 102.2^\circ$, $c_1 = 51.7$
 $\alpha_2 = 134.9^\circ$, $\gamma_2 = 12.4^\circ$, $c_2 = 11.4$

11. $x = 18.4$ miles

13. 539.5 m

15. 76.1 m

16a. 1

16b. $\frac{3\pi}{4}$

16c. $-\sqrt{3}$

16d. $-\frac{2\sqrt{3}}{3}$

16e. $-\sqrt{2}$

16f. $-\frac{\pi}{6}$

17a. $x = \frac{2\pi}{3} + 2\pi k$, $x = \frac{4\pi}{3} + 2\pi k$

17b. $x = \frac{\pi}{4} + 2\pi k$, $x = \frac{3\pi}{4} + 2\pi k$

19. $x = -3$